

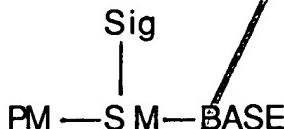


41 -

SUGAR MOIETY - LABELED NUCLEOTIDES

Abstract of the Disclosure

The present invention provides a nucleotide having the formula,



wherein PM is a phosphate moiety, SM is a ribose or a deoxyribose sugar moiety, and BASE is a pyrimidine, purine or 7-deazapurine moiety. PM is attached to SM at a position independently selected from the 2', 3', and 5' positions of SM when the nucleotide is a ribonucleotide, and at a position independently selected from the 3' and 5' positions when the nucleotide is a deoxyribonucleotide. BASE is attached to the 1' position of SM from the N¹ position when BASE is a pyrimidine, or the N⁹ position when BASE is a purine or 7-deazapurine. Sig is covalently attached to SM directly or through a linkage group. The present also provides an oligo- or polydeoxyribonucleotide (or polyribonucleotide) comprising at least one nucleotide (deoxyribonucleotide or ribonucleotide) in accordance with the above formula and description. These nucleotides (or oligo- and polynucleotides containing them) are useful as diagnostic tools for detecting analytes and as therapeutic agents.